TUCSON INTERNATIONAL AIRPORT AREA SUPERFUND SITE

COMMUNITY INVOLVEMENT PLAN

EPA United States Environmental Protection Agency

JANUARY 2020

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INTRODUCTION

The goal of this Community Involvement Plan (CIP) is to encourage and facilitate community engagement throughout the cleanup of the Tucson International Airport Area Superfund site (Site). EPA and the community will join in participatory two-way communication by applying the tools described in this plan. Active public involvement is crucial to the success of any project. EPA's community involvement activities at the Site are designed to inform the public about all cleanup activities and include the community in the decision-making process.

EPA defines the "community" as those people and entities who have an interest in or are affected by the Site. EPA also recognizes that other stakeholders, including local, state and federal agencies, may have an interest in the Site. This CIP is based on a series of community interviews conducted in 2019 with the affected community and stakeholders in accordance with EPA's Superfund community involvement and cleanup guidance. The CIP is a "living document," meaning that it can be updated or revised over the course of site cleanup to reflect long-term changes in the community.

Community Involvement at the Tucson International Airport Area Superfund Site

Active and participatory community involvement is an important part of the cleanup process and it is also a requirement of Superfund law. Community involvement is regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as "Superfund." This CIP follows community involvement requirements in the Superfund Amendment and Reauthorization Act of 1986 (SARA) §117 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) §300.430. EPA's Community Involvement Program is designed to facilitate participation of community members throughout the cleanup process, including site investigations and remedy selection. EPA works closely with state and local agencies to provide community involvement throughout the Superfund process.

THE COMMUNITY

COMMUNITY PROFILE

Site Overview

The Site includes seven project areas: the Air Force Plant #44 (AFP44) area, the Tucson Airport Remediation Project (TARP) area, the Texas Instruments property, the Morris Air National Guard (MANG) Base, the Airport property, the West Plume B area and the Former West Cap area. EPA has divided cleanup work in these project areas into six operable units (OUs). OUs may address geographic areas of a site, specific site issues or areas where a specific action is required. The 10-square-mile Site is located partly in southwest Tucson and partly on lands south of the city. The Santa Cruz River borders the Site to the west. Ajo Way borders it to the north. Alvernon Way borders the Site to the east. Hughes Access Road south of the AFP44 area borders it to the south.

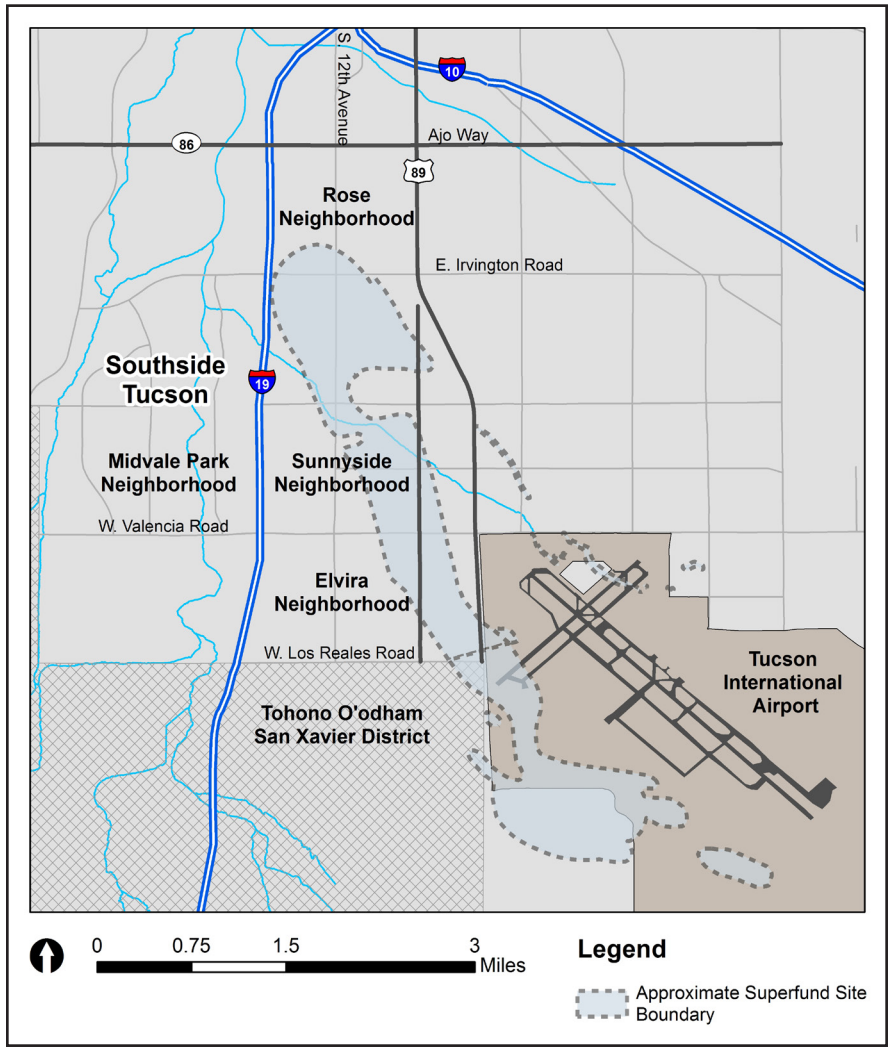
Primary contaminants of concern in groundwater are trichloroethene (TCE), 1,1-dichloroethene (DCE), chloroform and chromium. Two unregulated chemicals are also in the groundwater. These chemicals are 1,4-dioxane and per-and polyfluorinated alkyl substances (PFAS). Drinking water supplies in the area are tested regularly to make sure they meet federal and state drinking water standards. Tucson Water, the local drinking water provider, limits the amounts of 1,4-dioxane and PFAS in drinking water to less than EPA health advisory levels. Polychlorinated biphenyls (PCBs) and metals contamination have also been found in some soils at the Site.

For more information about drinking water, contact:

Tucson Water
310 West Alameda Street
Tucson, AZ 85701
https://www.tucsonaz.gov/water

Water Quality/Pressure Concerns
520-791-5945
customersupportunit@tucsonaz.gov

Customer Service
520-791-3242 or 800-598-9449
(toll-free)
Phone hours:
Monday to Friday, 7 a.m. to 5:30 p.m.
Lobby hours:
Monday to Friday, 8 a.m. to 5 p.m.
twwebacct1@tucsonaz.gov



The Tucson International Airport Area Superfund Site includes many neighborhoods in Tucson (Map sources: Esri, DeLorme, AND, Tele Atlas, First American, UNEP-WCMC, USGS, Arizona Department of Environmental Quality, City of Tucson Geographic Information Systems Services and the Bureau of Indian Affairs)

History of the Community

Tucson is one of the oldest continually inhabited areas in the United States, defined by its layers of rich history and diverse cultures. As early as the year 650, the Hohokam people inhabited the Santa Cruz Valley, including what is now present-day Tucson. The ancient Hohokam were succeeded by the Pima and Tohono O'odham, who lived in villages along the Santa Cruz River. In the late 17th century, Spanish missionary Father Eusebio Francisco Kino established missions in several Tohono O'odham and Pima villages. Kino founded the Mission San Xavier del Bac in the O'odham village of Wa:k. Spanish settlers also built military presidios, including the San Agustin del Tucson Presidio in present-day Tucson.

The Spanish settlement eventually became part of Mexico when the former colony became independent from Spain in 1821 and then was incorporated into American territory through the 1853 Gadsden Purchase. Many Mexican Americans relocated south from the presidio to the area around Plaza de la Mesilla in downtown Tucson, bringing Mexican culture with them. The Southern Pacific Railroad and University of Arizona were established in Tucson in 1880 and 1885, respectively.

Mission San Xavier del Bac

World War II brought military expansion to Tucson. In 1940, the federal government expanded Tucson's municipal airport into Davis-Monthan Air Base, a military facility four times as large as the original airport. Following World War II, defense industries continue to prosper in Tucson. In 1951, Hughes Aircraft, now known as Raytheon Missile Systems, established a manufacturing plant just south of the Davis-Monthan Air Base. By 1959, Hughes Aircraft was the largest employer in Arizona. (This is the current location of the Superfund site.)

Tucson also saw rapid suburbanization during the post-World War II era. Subdivisions such as Mission Manor were constructed in southern areas of Tucson to cater to people working at nearby military and industrial facilities. At the same time, city officials were looking for ways to attract more visitors to Tucson. To make way for a new shopping complex, the city relocated the predominantly Mexican American community from downtown Tucson in 1967. Many of those who relocated moved to Southside Tucson.

The city is uniquely situated between the Santa Catalina and Santa Rita Mountains in the Sonoran Desert. The area near Tucson hosts several natural recreation areas such as Saguaro National Park and the Arizona-Sonora Desert Museum. These areas draw in over 1.3 million visitors a year.

Tucson has and continues to be a center for the arts and culture. There are several local festivals that share traditional art and heritage such as the Mariachi Festival, now one of the largest in the world. The city is also one of the oldest filming locations in the nation. Over 400 Western films and shows were filmed in Old Tucson. Today, Tucson is home to over 545,000 people and includes extensive residential, commercial and industrial areas.

Tucson International Airport Area Demographics

Over 50,000 people reside in the site area according to information gathered from www.census.gov. See the table below for additional information about residents of the site area.

Demographic or Statistic	
For those identifying as one race only:	
Caucasian	66.3%
Asian	0.5%
African American	2.8%
Hispanic or Latino (of any race)	77.8%
Population Speaking English "less than very well"	23.3%
Population Born in Arizona	58.7%
Population Born in Another Country	24.3%
Median Age (years)	32.4
Average Household Size (members)	3.2
Median Household Income	$36,190
Population with at least a High School Education (for people age 25 and older)	30.9%

Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental and commercial operations or programs and policies.

Meaningful involvement means that:

1. Potentially affected community members have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health.
2. The public's contribution can influence the regulatory agency's decision.
3. The concerns of all participants involved will be considered in the decision-making process.
4. The decision makers seek out and facilitate the involvement of those potentially affected.

EPA recognizes environmental justice concerns at the Site. The site team strives to ensure that all activities are looked at through the lens of environmental justice, and that the community is treated fairly and equitably. Community members who live and work near the Site have a right to clean water and protected natural resources. EPA will work to continuously incorporate environmental justice initiatives in the work done at the Site.

EJSCREEN

EJSCREEN is an environmental justice mapping and screening tool. It uses environmental indicators of a community to indicate potential exposures and demographic factors to indicate potential susceptibility. An EJSCREEN analysis conducted for the Site in 2019 demonstrated environmental justice concerns in the surrounding community; 10 indicators were at the 80th percentile or above compared to the rest of the United States.

COMMUNITY ISSUES, CONCERNS AND DISCUSSION

Community concerns are fundamental to CIP development and community outreach activities. Starting in April 2019 and continuing through October 2019, EPA conducted in-person interviews with 14 interested individuals about the Site. People interviewed represented city, county, tribal and state agencies, educational institutions, site-related community groups, and residents. For a full list of the interview questions, please see the appendices. Interviewees were asked a variety of questions about their personal history with the Site, their understanding of the Site and their preferred methods of communication regarding the Site. These interviews provided EPA with useful and valuable information that has been incorporated into the CIP.

Most of the interviewees have extensive familiarity with the Site. People who have had contact with EPA and state and local agencies indicated that the relationships have been mostly good, helpful and productive. While the interviewees and their responses were diverse, comments from the stakeholder interviews can be grouped into six main categories: health effects; site history, education, and awareness; poor communication and mistrust; site cleanup; community involvement; and method of communication. The following section summarizes interview findings in each of these categories.

Comments/Issues Directly From Community Interviews

Health Effects

Interviewees expressed concern about the effects of long-term exposure to TCE contamination. Many interviewees mentioned personal illnesses and illnesses of friends and family members exposed to the contamination. Specific concerns included that illnesses such as cancer develop over time and that there has not been a full epidemiological study in the area on potential health effects from past site contamination. Interviewees requested health-related services and/or benefits for people exposed to the contamination such as a clinic where residents can be tested. The benefits should extend to residents living in the area now as well as people who previously lived in Southside Tucson and were exposed to the contamination. Interviewees also expressed concern about PFAS, past chromium contamination at the Site and the possibility that new contaminants may be discovered at the Site in the future.

Site History, Education and Awareness

Most interviewees understood that the Site's history and cleanup is important, and area residents – especially recent arrivals – should be well informed. They noted that newer residents may not have a good sense of the Site's history or understand that site issues date to the 1940s. Several interviewees talked about providing information about the Site and TCE and its health effects to schools in the area, and the importance of ensuring that local children are aware of the Site and its history. One interviewee mentioned interest in also providing educational materials to the San Xavier Tohono O'odham community.

Poor Communication and Mistrust

Many interviewees cited poor communication between the Site's potentially responsible parties (PRPs) and the community as a concern. They noted that community members attending meetings such as the quarterly Unified Community Advisory Board (UCAB) meetings are often confused by technical presentations and site information, and that there is sometimes a disconnect in communicating information clearly to the public. Some interviewees noted that documents from different sources can have conflicting information, which results in mistrust in the community. Interviewees requested the use of plain language, less complicated charts, and fewer technical terms and acronyms in site documents. Interviewees also suggested sharing site information in a timely manner and potentially using a specialized science communicator to relay information to the community.

Site Cleanup

Most interviewees were extensively familiar with the Site. Many interviewees knew about its history, from the contamination through ongoing cleanup efforts. Cleanup-related concerns raised by interviewees included potential effects on water quality and the aquifer, that the Superfund process can be confusing to residents in the community, and interviewees had questions about the status of ongoing monitoring of water quality. Interviewees requested information on how the water is treated before its delivery to the community, what each of the parties working on site are

EPA remedial project manager Mary Aycock (sixth from left) and EPA community involvement coordinator Viola Cooper (fifth from left) at the UCAB tour

responsible for, and how long the cleanup will take. Interviewees also noted that there are many people in the community who are less familiar with the Site, and that providing them with general site overview information and regular status updates would be helpful. To provide cleanup-related information to the community effectively, interviewees recommended developing a three-dimensional plume model, providing a Superfund glossary to community members at events such as UCAB meetings, having a central place or contact person where the community can find cleanup information, using visuals and graphics, developing a site history handout, and hosting stakeholder focus groups when significant cleanup decisions are made.

Community Involvement

Most of the interviewees currently receive regular information regarding the Site. Information comes from several sources, including the UCAB, Tucson Water, the Arizona Department of Environmental Quality (ADEQ), EPA and other local community groups. Some interviewees felt that the information they receive about the Site is easy to understand. Others felt that although the information is easily understood by them, it would be difficult to understand for those less familiar with the Site. The majority of those interviewed attend the UCAB meetings regularly and some cited the UCAB as their primary source of site information. Broader public awareness was a concern raised by many of the interviewees who believe the community needs to be educated about the Site's history, cleanup work completed to date, and ongoing and planned future efforts to clean up the Site.

Method of Communication

Responses regarding the level of community engagement efforts at the Site varied greatly. Some interviewees stated that the level of community involvement was good; others felt that it was insufficient. Some interviewees noted that, although community engagement could be increased, it is moving in the right direction, with several interviewees complimenting Tucson Water's efforts. Overall, public awareness of the Site and ongoing remediation efforts could be increased. Outreach efforts by EPA and state and local agencies should be coordinated to ensure information is consistent and accurate.

Outreach efforts should continue to take some community members' Spanish language needs into account. Emails and mailings were the primary forms of communication requested by interviewees. Attachments such as fact sheets, meeting

announcements and minutes, and newsletters could be included in the emails and mailings. The suggested frequency of updates was mixed, ranging from quarterly to annually, or whenever significant new site information is available. The information should be easy to understand and written in plain language.

For community meetings, interviewees mentioned attending the quarterly UCAB meetings and EPA TASC meetings and noted the need for more plain language documents with site information that everyone can understand. Interviewees said that presentations, technical assistance services that provide general and timely site updates using plain language, and infographics, maps and other visual aids could be helpful. Most interviewees requested that community meetings be held in the evenings mid-week. Saturday mornings could also be a good time for community meetings. Several interviewees suggested that information should be available and distributed in English and Spanish, with consideration also given to other language needs in the community, including Tohono O'odham.

Quarterly UCAB meetings are held at the El Pueblo Center

Community Resources

Tucson Water
310 West Alameda Street
Tucson, AZ 85701
520-791-5945 (for water quality/pressure concerns)
customersupportunit@tucsonaz.gov
https://www.tucsonaz.gov/water

Arizona Department of Environmental Quality (ADEQ)
Southern Regional Office
400 West Congress Street, Suite 433
Tucson, AZ 85701
520-628-6733 or 888-271-9302 (toll-free)
https://www.azdeq.gov

Pima County Health Department
520-724-7770
https://webcms.pima.gov/government/health_department

Technical Assistance Grant (TAG)

EPA awards federal technical assistance grants (TAGs) to incorporated nonprofit organizations representing community members affected by a Superfund site. The recipient uses the grant to fund the services of an independent environmental professional to provide an independent technical review of cleanup documents. The technical advisor explains EPA documents to help the community understand technical information regarding the investigation and cleanup and relays community concerns to EPA. Interested community members may contact EPA's Community Involvement Coordinator for more information.

THE COMMUNITY INVOLVEMENT ACTION PLAN

EPA spoke with 14 key stakeholders representing a cross section of the community and conducted interviews in April, September and October 2019. These interviews significantly contributed to the creation of this CIP, determining how EPA will continue to develop and enhance communications regarding the Tucson International Airport Area Superfund site.

Ongoing Communication

EPA will continue to work with Tucson Water, the city of Tucson, the U.S. Air Force, the Tucson Airport Authority, ADEQ, Pima County Health Department, the UCAB, and community organizations and community members to ensure that important site updates and information are shared directly with the public. The CIP interviews indicated that an ongoing EPA and other agency presence is important to the community and that EPA staff's presence at regular meetings such as the UCAB meetings is valued.

Communication Tools

Community members expressed a preference for a combined approach to information sharing. EPA will use various methods to provide the community with information, including printed and online materials as well as attendance at meetings. The most common tools that EPA will implement are fact sheets, community meetings, presentations and outreach at community events such as the UCAB meetings. These communication tools will continue to promote collaboration and establish a deeper connection between EPA and the community. EPA is committed to using various methods to provide the community with information and to communicate the progress of the cleanup with the public.

1. Fact Sheets and Flyers

Fact sheets and flyers provide the public with regular updates on the cleanup, upcoming community meetings and other pertinent information. The fact sheets and flyers will be clear and easy to read (in English and Spanish) and contain graphics when necessary. EPA will continue to develop and distribute the fact sheets and flyers and will distribute information to other groups and stakeholders about specific activities and findings. Fact sheets will continue to be distributed via email and mail. The materials will include contact information to allow direct access to EPA staff and ensure timely responses from EPA.

2. Community Meetings

In addition to the quarterly UCAB meetings, EPA will host public meetings as needed for community members to learn about the Site and cleanup efforts and to provide the public with an opportunity to ask questions about the Site. A Spanish-speaking interpreter and translated materials will be available for the public when needed. Other interpreters may be available as other language needs arise. Potential meeting locations include El Pueblo Center, Valencia Public Library or another location convenient for most people in the community. Interviewees indicated an overall preference for midweek evening meetings, with Saturday mornings as an alternative option. UCAB meetings are held the third Wednesday of January, April, July and October. The meetings start at 5:45 p.m.

Community meetings could be held at the Valencia Public Library

at the El Pueblo Senior Center, 101 West Irvington Road. Other community meetings will be held as necessary in a central location that is easily accessible.

3. Presentations and Outreach at Community Events

EPA will ensure that site-related information is widely available in the community. Specific outreach opportunities include the UCAB quarterly meetings, meetings with local community groups, and coordinating with Sunnyside School District. EPA staff will continue to attend the quarterly UCAB meetings.

4. Briefings with Local Officials

EPA will brief city of Tucson and Pima County elected officials upon their request for information or in correspondence with relevant site information.

5. Print and Online Media

EPA will use the *Arizona Daily Star* and *La Estrella de Tucsón* (Spanish) newspapers to publicize important site information and to give public notice related to the Site. EPA's site website provides access to site-related documents: http://www.epa.gov/superfund/tucsonairport. Webpages and technical documents are in English only. Some site information such as fact sheets will continue to be posted in Spanish and other languages as well as English. EPA will also coordinate with several community organizations that may link their websites to the EPA website.

6. Mailing List

EPA will continue to maintain and update the site mailing list. The list has been developed from meeting sign-in sheets, community interviews, and email and telephone inquiries. To be added to the mailing list, please send a request by email, telephone or standard mail to EPA (see "Key Contacts" on page 11).

7. Community Outreach and Education

Educating and informing the public using clear and plain language information about the Site's history and current status, the progress of cleanup efforts, and future cleanup plans and monitoring efforts was a consistent request made by the interviewees. Efforts to reach community members will be made using the communication tools discussed above as well as additional techniques such as door-to-door outreach and hosting stakeholder meetings.

8. Information Repositories

EPA has established a location in the community where site documents can be reviewed. Information repositories are maintained at Valencia Public Library as well as the EPA Region 9 Superfund Records Center in San Francisco. Each information repository includes copies of site deliverables (e.g., work plans and reports), monitoring and progress reports, Five-Year Reviews, the CIP, and other data and information designated by EPA. These documents may be reviewed at Valencia Public Library during normal library hours. A complete copy of the Administrative Record is also available for review by community members; it is maintained by EPA at its regional office in San Francisco.

Site documents can be found at the Valencia Public Library's information repository

Valencia Public Library
202 West Valencia Road
Tucson, AZ 85706
520-594-5390
https://www.library.pima.gov/locations/val

EPA Superfund Record Center
75 Hawthorne Street
San Francisco, CA 94105
415-947-8717

I'itoi, the Man in the Maze, an emblem of the Tohono O'odham Nation, on a gate at Mission San Xavier del Bac

The San Xavier District flag

UCAB plaque at the Valencia Library

Key Contacts

USEPA Region 9

Mary Aycock
Remedial Project Manager
U.S EPA, Mail Code SFD 8-1
75 Hawthorne Street
San Francisco, CA 94105
415-972-3289
aycock.mary@epa.gov

Community Relations Office
U.S. EPA, Mail Code SFD-6-3
75 Hawthorne Street
San Francisco, CA 94105
800-231-3075 (toll free)

Arizona Department of Environmental Quality (ADEQ)

Matt Narter
Southern Regional Office
400 West Congress Street, Suite 433
Tucson, AZ 85701
520-770-3128 or
800-234-5677, ext. 5207703128
mn3@azdeq.gov

Tucson Water

Jeff Biggs
Administrator
310 West Alameda Street
Tucson, AZ 85701
520-349-2441
jeff.biggs@tucsonaz.gov

Tucson Airport Authority

Eric Roudebush
Director of Environmental Services
7250 South Tucson Boulevard, Suite 300
Tucson, AZ 85756
520-573-4805
eroudebush@flytucson.com

Davis-Monthan Air Force Base

5285 East Madera
Tucson, AZ 85707
520-228-3378
https://www.dm.af.mil

Morris Air National Guard Base

Genevra (Lee) Golden
1700 East Valencia Road
Tucson, AZ 85706
https://www.goang.com/locations/arizona/tucson-air-national-guard-base.html

Pima County Department of Environmental Quality

Marie Light
Stormwater Planning Manager
33 North Stone Avenue, Suite 700
Tucson, AZ 85701
520-724-7457
marie.light@pima.gov

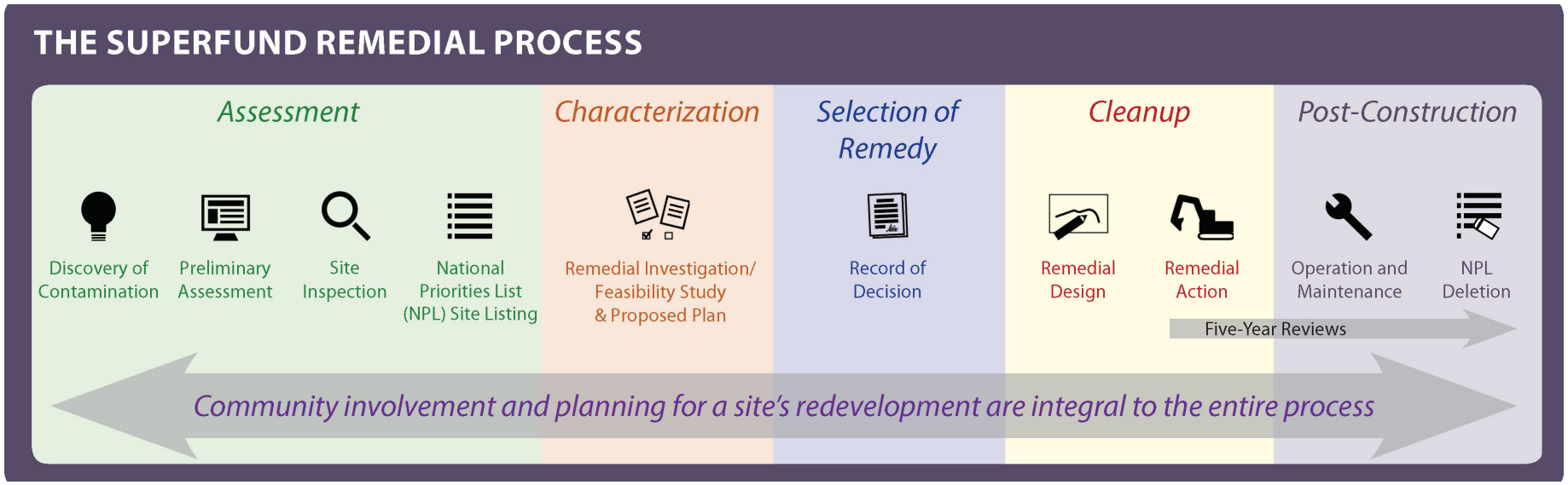
Pima County Health Department

Spencer Graves
3950 S. Country Club Road, Suite 100
Tucson, AZ 85714
520-724-7770
spencer.graves@pima.gov

APPENDICES

OVERVIEW OF THE SUPERFUND CLEANUP PROCESS

The Superfund cleanup process begins with site discovery or notification to EPA of possible releases of hazardous substances. Sites are discovered by various parties, including citizens, state agencies and EPA regional offices. EPA then evaluates the potential for a release of hazardous substances from the site through the steps shown below.



TUCSON INTERNATIONAL AIRPORT AREA SUPERFUND SITE TECHNICAL OVERVIEW

The Site includes seven project areas: the Air Force Plant #44 (AFP44) area, the Tucson Airport Remediation Project (TARP) area, the Texas Instruments property, the Morris Air National Guard (MANG) Base, the Airport property, the West Plume B area and the Former West Cap area. EPA has divided cleanup work in these project areas into six OUs. OUs may address geographic areas of a site, specific site issues or areas where a specific action is required. The 10-square-mile Site is located partly in southwest Tucson and partly on lands south of the city. The Santa Cruz River borders the Site to the west. Ajo Way borders it to the north. Alvernon Way borders the Site to the east. Hughes Access Road south of the AFP44 area borders it to the south.

The main issue at the Site is contamination of groundwater, with the area of contaminated groundwater being about 4 miles long. The primary contaminants of concern in groundwater are TCE, DCE, chloroform and chromium. PCBs and metals contamination have also been found in some soils at the Site. Two unregulated chemicals are also in the groundwater. These chemicals are 1,4-dioxane and a group of chemicals called per-and polyfluorinated alkyl substances (PFAS). 1,4-dioxane has an EPA health advisory of 0.35 parts per billion in drinking water. Two PFAS – perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) – have an EPA health advisory of 70 parts per trillion in drinking water for PFOA plus PFOS.

To manage site investigations and cleanup, EPA divided the Site into six OUs. OU1 is groundwater. It is divided into Area A (western half) and Area B (eastern half).

Project Areas	Operable Units
1. Air Force Plant #44 (AFP44)	OU3 and OU4
2. Tucson Airport Remediation Project (TARP)	OU1 (Area A) and OU5
3. Texas Instruments Property	OU1 (Area B) and OU2
4. Morris Air National Guard (MANG) Base, formerly known as Arizona Air National Guard (AANG) Base	OU1 (Area B) and OU2
5. Airport Property	OU2
6. West Plume B Area	OU1 (Area B)
7. Former West Cap Area	OU1 (Area B), OU2 and OU6

TIAA Project Areas and OUs

Area A groundwater includes the TARP area. Area B groundwater includes the Texas Instruments property, the MANG Base, the West Plume B area and the former West Cap area. OU2 is Airport property soil and shallow groundwater. It includes the Three Hangars Building and soil at the Texas Instruments property, the MANG Base and the former West Cap area. OU3 is AFP44 soil and groundwater. OU4 is 1,4-dioxane in AFP44 groundwater. OU5 is 1,4-dioxane in TARP groundwater. OU6 is treatment by in situ (in place) chemical oxidation (ISCO) in the former West Cap area. The table above shows how the project areas and OUs are related.

In 1976, the state of Arizona closed a drinking water well at the AFP44 area due to high levels of chromium. In 1981, EPA and the Arizona Department of Health Services found volatile organic compounds (VOCs) in the upper zone of the regional aquifer beneath the airport. Beginning in 1981, the city of Tucson closed all municipal wells that exceeded the state action level for TCE and notified private well users of the potential risks. EPA and the U.S. Air Force studied the Site during the 1980s. In 1985, the Air Force wrote a cleanup plan for AFP44 groundwater (OU3), setting the cleanup goal as EPA's maximum contaminant levels (MCLs) for

drinking water. In 1988, EPA selected a sitewide cleanup plan for groundwater contamination (OU1) at the Site. In 1997, EPA selected another cleanup plan to use soil vapor extraction (SVE) to remove VOCs from the unsaturated soils above groundwater (vadose zone) and to extract groundwater from the shallow groundwater zone of the upper aquifer to prevent migration of VOCs into the regional aquifer. Over time, the Air Force issued cleanup plans for various parts of the AFP44 area.

During the spring and summer of 2002, 1,4-dioxane was discovered at the AFP44, TARP and Airport property project areas, prompting EPA to designate OU4 and OU5 as 1,4-dioxane in AFP44 groundwater and TARP groundwater, respectively. In 2007, EPA issued an order to the Air Force and Raytheon to design, build and operate an advanced oxidation treatment plant at AFP44 to treat TCE and 1,4-dioxane. The system became fully operational in 2009. In 2013, Tucson Water constructed an advanced oxidation process (AOP) system to remove TCE and 1,4-dioxane from the groundwater. The system began to operate fully in early 2014. The AFP44 and TARP water treatment facilities both include advanced oxidation processes to remove 1,4-dioxane, TCE and other VOCs.

The TARP facility produced over 48.5 billion gallons of drinking water and removed 5,370 pounds of TCE from the aquifer from September 1994 to August 2017. Treated water from TARP is discharged to a reservoir that is part of the Tucson potable water distribution system. As of December 2017, about 31.3 billion gallons of groundwater have been extracted and recharged by the AFP44 water treatment facility, and 25,103 pounds of VOCs have been removed from groundwater since the groundwater extraction and treatment system started operating in 1987. About 120 pounds of 1,4-dioxane were removed by the AOP system from 2009 to 2017.

EPA conducted its second Five-Year Review of OUs 1, 2 and 3 in 2018. This review noted that an investigation of whether polyfluorinated compounds (PFCs), also called PFAS, have impacted site groundwater and soil at OU3 was underway. These are substances present in various materials, including aqueous film-forming foam used in fire-fighting foam. There is a known association between PFAS and the operational history of the Site. Tucson Water has detected PFOA and PFOS at wells in northwest Tucson, in the vicinity of Davis-Monthan Air Force Base (DMAFB) and in the TARP well field, and in some wells associated with its reclaimed water system.

Currently, the groundwater treatment systems are successfully reducing groundwater contaminant concentrations and limiting movement of contaminants. TARP is monitoring for PFAS and blending water to keep levels below the EPA health advisory level. Treated water from AFP44 and TARP meets federal drinking water standards and regional screening levels.

Remediation systems are in operation at all seven project areas.

- **AFP44.** In 1987, the Air Force began to pump and treat groundwater at AFP44. The goal was to remove chromium-6 and VOCs. In 1995, contaminated soils (cadmium, chromium and lead) were dug up and removed from AFP44. In 2002, 1,4-dioxane was found in groundwater at AFP44 and TARP. In 2009, AOP treatment of groundwater using ultraviolet light and peroxide began at AFP44. The treatment removes 1,4-dioxane and VOCs, including TCE. Treated water is re-injected into the aquifer.

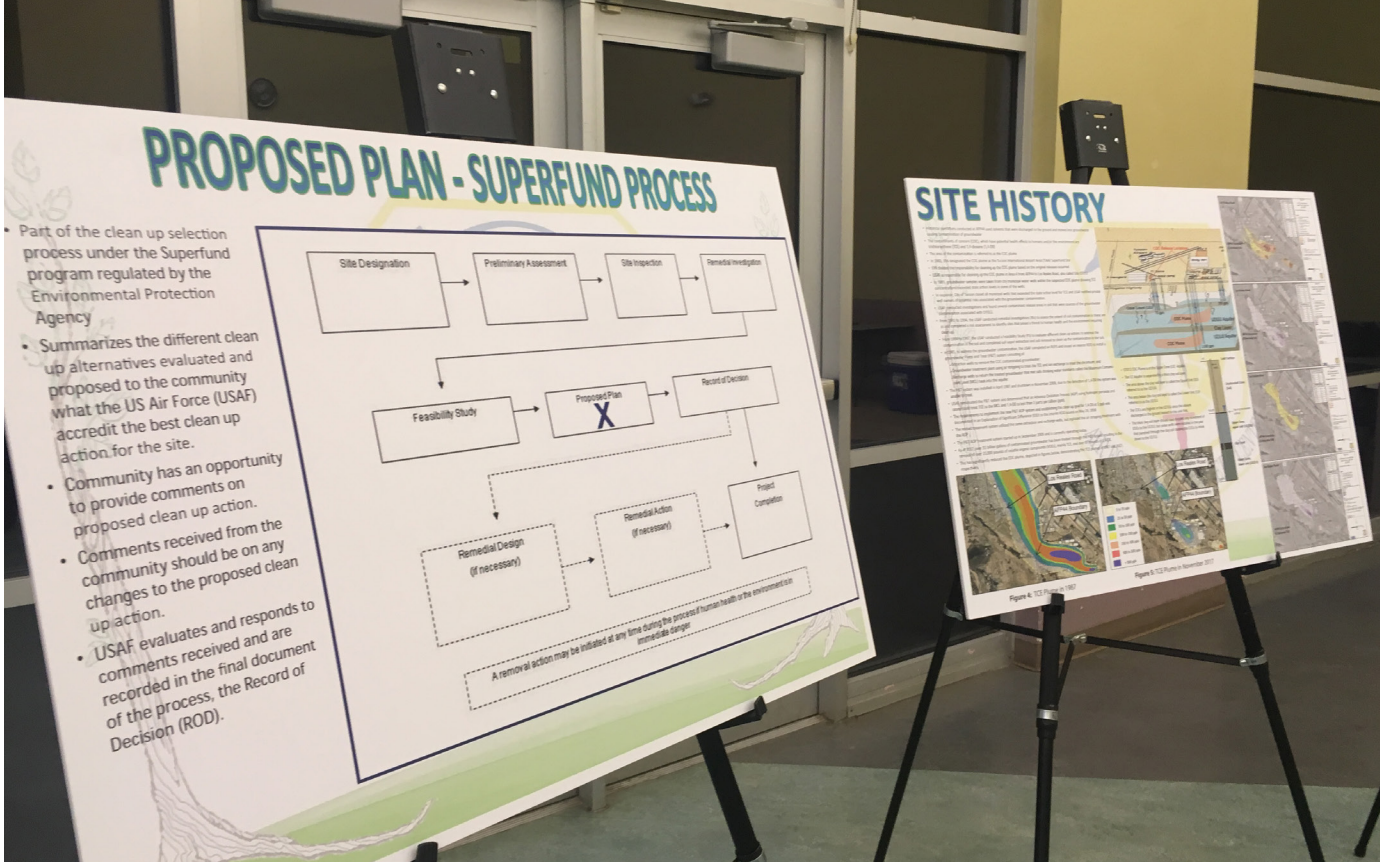
- **TARP.** In 1994, the TARP groundwater treatment plant began removing TCE from groundwater. It does so by using aeration columns. In 2014, treatment with ultraviolet light and peroxide added to the TARP aeration treatment system. It removes 1,4-dioxane, TCE and other VOCs from water. In 2017, EPA issued a Proposed Plan to update the TARP Record of Decision (ROD). It continues the ultraviolet light and peroxide treatment system. It also removes the unnecessary aeration treatment. Long-term monitoring and institutional controls protect people from contaminated groundwater. EPA has also proposed to add a 10th remediation well and perform upgrades to the treatment facility. Treated water is delivered to the Tucson Water distribution system. In 2019, granulated activated carbon will be added to the TARP treatment system to remove PFAS.

- **Texas Instruments Property.** In 1992, Texas Instruments (formerly Burr-Brown) began pumping and treating groundwater. In 2012, groundwater remedy changed from pump and treat to ISCO. ISCO injects potassium permanganate below ground to destroy TCE and other VOCs. In 2017, ISCO treatment began. Treatment is ongoing. Groundwater monitoring twice per year is also ongoing.

- **Arizona Air National Guard (AANG) Base, known as Morris Air National Guard (MANG) Base beginning in 2018.** In 2012, the groundwater remedy was updated from pump and treat to ISCO. Groundwater monitoring takes place four times per year.

- **Airport Property.** In 1997, soils with PCBs in the El Vado neighborhood and the Three Hangars Building area were dug up and removed. In 2002, five wells were installed on the Airport property. The goal was to cut off the shallow groundwater zone from the deeper regional aquifer. Groundwater is pumped to a treatment facility. Treated water is injected into the regional aquifer. In 2006, ISCO treated DCE in groundwater at the Samsonite Building Area. It is northwest of the Three Hangers building. In 2007, SVE began on the Airport property. The goal is to remove VOCs from soil. In 2011, the landfill on the Airport property was capped. It was covered with clay and vegetation layers. The goal was to reduce rainwater entering the landfill. In 2012, pipeline sludges with PCBs above 760 parts per billion were dug up and removed. In 2015, a vapor intrusion investigation was conducted for the Three Hangars Building and the neighborhood west of it. Results showed vapor intrusion was not a significant health concern.

- **West Plume B Area.** In 2012, the remedy for this area was updated to monitored natural attenuation (MNA). MNA is ongoing.



Poster displays at the September 2019 Proposed Plan Meeting

- **Former West Cap Area.** In 2002, an SVE study pulled about 180 pounds of VOCs from one SVE well near Building A. Additional treatment of soils in this area not needed. In 2012, EPA changed the groundwater remedy from pump and treat to ISCO. In 2014, ISCO treatment began and is ongoing. Groundwater monitoring takes place twice per year.

Plaque honoring one of the UCAB founders, Manny Herrera, Jr.

TIMELINE OF ENVIRONMENTAL AND REGULATORY ACTIVITIES

Year	Activity
1950-1970	Historic industrial and defense-related activities resulted in the release of hazardous wastes into soil and groundwater, leading to extensive contamination of the regional aquifer. The sources of groundwater contamination included the AFP44 and the Airport property project areas.
1976	State of Arizona closes a well at AFP44 due to high levels of chromium.
1983	EPA lists the Site on the National Priorities List (NPL).
1987	A large-scale pump, treat and reinjection system is installed to contain and remediate regional aquifer groundwater contamination.
1992	Burr-Brown (now Texas Instruments) begins operation of a groundwater pump-and-treat system.
1994	The TARP groundwater remediation system, including extraction wells, treatment plant and associated piping, is completed.
1994	Dual-phase extraction systems are installed to treat VOC-contaminated soils and groundwater.
1995	Nearly 57,000 tons of metals-contaminated soils (cadmium, chromium and lead) are excavated and removed from AFP44.
1996	Large-scale SVE systems are built to remove VOCs from soils.
1997	Excavation of PCB-contaminated soils in the El Vado neighborhood and at the Three Hangers area of the Airport property is completed. The excavated soils in the residential areas are replaced with clean fill dirt and new landscaping.
2002	1,4-dioxane up to about 12 parts per billion (ppb) is discovered in the TARP project area.
2002	1,4-dioxane is discovered in concentrations ranging from 1.0 to 54.0 ppb.
2004	Soil contamination at site 2 is reduced to a level that will not impact groundwater above TCE MCLs for drinking water.
2005	The contaminant 1,4-dioxane is detected at concentrations up to 36 ppb.

Year	Activity
2006	The U.S. Geological Survey Arizona Water Science Center and the U.S. Air Force Aeronautical Systems Command samples 34 wells west of AFP44. 1,4-Dioxane concentrations range from non-detect to 11 ppb.
2006	The AANG installs three new monitoring wells on the south end of West Plume B for possible MNA monitoring.
2007	To address a data gap, the AANG installs six new monitoring wells west of the AANG Base property boundary.
2007	Construction of the groundwater and SVE treatment plant for the Airport property is completed.
2008	The AOP treatment system upgrade is installed at AFP44.
2008	The dual-phase extraction system is evaluated for operational efficiency and determined to no longer be effective. It is shut down. Together, the dual-phase extraction and soil vapor extraction systems removed about 107,514 pounds of VOCs from subsurface soils.
2009	The AOP system to remove 1,4-dioxane, TCE and other VOCs becomes fully operational. It replaces the air-stripping treatment system built in 1987.
2009	The groundwater pump-and-treat system is shut off at the Texas Instruments property. Since 1992, this system removed about 16.3 pounds of TCE from about 176 million gallons of groundwater beneath the Texas Instruments project area.
2010	EPA Region 9 revises its toxicity assessment of 1,4-dioxane and lowers the protective risk range in drinking water to between 3.0 ppb and 35.0 ppb for a lifetime of exposure. Tucson Water demonstrates that both ozone-peroxide and UV-peroxide advanced oxidation treatment technologies could effectively treat 1,4-dioxane, TCE and 1,1-DCE.

Year	Activity
2010	The Airport property remediation systems continue to operate. The soil gas zone (SGZ) remediation system includes six groundwater extraction wells pumping groundwater to a treatment facility that used an air stripper to remove VOCs from the extracted groundwater. Treated water is re-injected into the regional aquifer. The air stripper off-gas is treated by vapor phase granular activated carbon (GAC).
2010	The SVE remedy continues to operate. Its objectives are to contain the VOC contamination within the Technical Impracticability Zone and to contain VOC contamination in the area near well SVE-07.
2011	The U.S. Air Force signs a Federal Facilities Agreement with EPA and ADEQ to clean up Air Force-owned property at AFP44. Under the terms of the agreement, the Air Force will work with EPA and ADEQ to remediate areas impacted by AFP44 south of Los Reales Road.
2011	The Air Force collects soil boring and groundwater samples to help determine the mechanism by which chromium levels may be lowering in the subsurface at Building 801 area. The data are presented in the focused FS report.
2011	EPA issues a new Drinking Water Health Advisory for 1,4-dioxane that ranges from 35 ppb (excess cancer risk of 100 in one million) to 0.35 ppb (excess cancer risk of 1 in one million). Based on engineering evaluations and pilot-scale treatability testing, Tucson Water determines that the use of ultraviolet light with hydrogen peroxide injection (UV-peroxide) is the best AOP option for 1,4-dioxane treatment at TARP.
2012	Construction work to close the Tucson Airport Authority (TAA) landfill is completed.
2012	On July 18, the city of Tucson sponsors a groundbreaking ceremony for the AOP water treatment facility.

Year	Activity
2012	EPA issues a ROD Amendment that selects ISCO to replace the pump-and-treat remedies at the Texas Instruments, West Cap and AANG Base project areas. The ROD Amendment also concludes that MNA will continue for West Plume B.
2012	Cleanup of PCB contaminated soils was completed.
2013	ADEQ performs a pre-certification inspection of the TAA landfill remedy landfill cap in February. Both the SGZ remedy system and the SVE system continued to operate and remove VOCs from the groundwater and soil.
2014	The Air Force issues a Proposed Plan for No Further Action (NFA) at the 1980s Pistol Range and began treatability studies to determine the effectiveness of hydraulically fracturing and in-situ treatment of groundwater contamination within fine-grained units underlying AFP44.
2014	EPA designs and installs an ISCO remedy to replace the pump-and-treat remedy at the West Cap project area.
2016	EPA issues an updated health advisory for PFOA and PFOS. The current health advisory for PFOA and PFOS is 70 parts per trillion (ppt). Tucson Water has monitored for PFOA and PFOS since 2009 and has the goal of delivering drinking water with less than 18 ppt.
2017	The AANG monitors groundwater at the West Plume B project area. One monitoring well had 8 ppb TCE. This was the only well still above the 5 ppb federal drinking water standard for TCE.
2018	EPA issues a Proposed Plan for a ROD Amendment for cleanup of contaminants in groundwater in Area A.
2018	Tucson Water detects PFOA and PFOS at wells in northwest Tucson, in the vicinity of DMAFB, in the TARP well field, and in some wells associated with the reclaimed water system. Concentration of PFOA and PFOS exiting the TARP AOP facility was about 30 ppt. Tucson Water shut down three wells to reduce the amount of these two chemicals entering the TARP AOP facility. Tucson Water continues to monitor and blend water to keep concentrations below 18 ppt.

GLOSSARY OF TERMS

Most of the terms defined below are used in this CIP.

1,1-Dichlorethene (1,1-DCE): 1,1-DCE has been used as an industrial solvent, in the manufacture of other solvents, and is a degradation product of the solvent 1,1,1-trichloroethane (1,1,1-TCA).

1,4-Dioxane: 1,4-dioxane has been used as a stabilizer in 1,1,1-TCA and other chlorinated solvents and is found in some consumer products.

Administrative Record: A collection of documents that contains information considered by EPA or other lead agency when selecting a response action under CERCLA. The Record is typically made available for public review at an information repository near the Site, at the regional EPA office and on an EPA website.

Aquifer: An underground geological formation containing water. Aquifers are sources of groundwater for wells and springs.

Cleanup: The term used for actions taken to deal with a release or threat of release of a hazardous substance that could affect human health and/or the environment. The term is sometimes used interchangeably with the terms *remedial action*, *removal action*, *response action* and *corrective action*.

Community Involvement Plan (CIP): A document that identifies techniques used by EPA to communicate effectively with the public during the Superfund cleanup process at a specific site. A CIP typically describes the site history, nature and history of community involvement, and concerns expressed during community interviews. In addition, the plan outlines methodologies and timing for continued interaction between the agencies and the public at the site.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (commonly known as Superfund): A law, enacted by Congress in December 1980, that created the Superfund program. CERCLA provides EPA with the authority to clean up contaminated sites and identifies parties that may be held responsible for performing cleanup work or reimbursing the government for cleanup costs.

Concentration: The amount of a chemical in a given volume of air, water or other medium.

Environmental Justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin or income, with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

A mural at the Valencia Public Library

The ADEQ office in Tucson

Explanation of Significant Differences (ESD): A document that describes significant changes to a Superfund cleanup plan (i.e., a ROD) and the reasons for the changes.

Extraction Well: Extraction wells are used to pump groundwater to the surface, where the contaminants are removed.

Feasibility Study (FS): A process followed at most Superfund sites to evaluate potential cleanup alternatives.

Five-Year Review: A periodic review of a Superfund site that is generally required when hazardous substances remain on site above levels that permit unrestricted use and unlimited exposure. The purpose of a Five-Year Review is to evaluate the implementation and performance of a remedy and whether a remedy remains protective of public health and the environment.

Granular Activated Carbon (GAC): A material commonly used in the treatment of contaminated water. It is effective in removing a variety of organic compounds, including chemicals that affect taste and odor.

Groundwater: The supply of fresh water found beneath the surface of the earth.

Information Repository: A collection of technical reports and other documents regarding a Superfund site. The information repository is usually located in a public building that is convenient for local residents, such as a public school, city hall or library.

Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water by EPA or state regulations. These levels are based on consideration of health risks, technical feasibility of treatment and a cost-benefit analysis.

Monitoring Well: Monitoring wells are used to make subsurface measurements and collect samples to determine the amounts, types and distribution of contaminants in groundwater.

National Contingency Plan (NCP): The federal government's blueprint for responding to oil spills and releases of hazardous substances.

National Priorities List (NPL): EPA's list of uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Operable Unit (OU): A portion of a Superfund site at which site actions are separately planned, executed and monitored.

Perchloroethylene (PCE): PCE was a widely used industrial solvent and is used for dry cleaning.

Potentially Responsible Party (PRP): An individual, company or other entity that is potentially responsible for cleanup of a Superfund site.

Record of Decision (ROD): A public document that explains which cleanup alternative will be used at a Superfund site.

Remedial Action: The construction or implementation phase of a Superfund site cleanup.

Remedial Investigation (RI): An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a Superfund site and assess risks to human health and the environment.

Remedy: The method selected to clean up a Superfund site.

Removal Action: Short-term actions that address releases of hazardous substances that require expedited responses.

Superfund: The common name used for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Superfund activities include conducting and/or supervising hazardous waste site cleanups and other remedial actions.

Technical Assistance: The provision of services focused on increasing community understanding of the science, regulations and policies related to environmental issues and EPA actions.

Trichloroethylene (TCE): TCE was a commonly used industrial solvent and is one of the most common contaminants at Superfund sites nationally.

Vapor Intrusion: A process where vapors from VOC contamination in groundwater make their way into indoor air.

Volatile Organic Compound (VOC): Organic compounds that have relatively low boiling temperatures and high vapor pressure at room temperature. VOCs are emitted as gases from certain solids or liquids.

ACRONYMS AND ABBREVIATIONS

AANG	Arizona Air National Guard Base
ADA	Americans with Disabilities Act
ADEQ	Arizona Department of Environmental Quality
AFP44	Air Force Plant #44
AOP	Advanced Oxidation Process
ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	Community Involvement Plan
DCE	1,1-Dichloroethene
DMAFB	Davis-Monthan Air Force Base
DPE	Dual-Phase Extraction
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study
GAC	Granular Activated Carbon
gpm	Gallons per Minute
ISCO	In Situ Chemical Oxidation
IX	Ion Exchange
LULAC	League of United Latin American Citizens
MANG	Morris Air National Guard Base (formerly known as AANG)
MCL	Maximum Contaminant Level
MNA	Monitored Natural Attenuation
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
NPL	National Priorities List
OU	Operable Unit
PCBs	Polychlorinated Biphenyls
PFAS	Per-and Polyfluorinated Alkyl Substances
PFCs	Polyfluorinated Compounds
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonic Acid
ppb	Parts per Billion
ppt	Parts per Trillion
PCE	Perchloroethylene
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RP	Responsible Party
SARA	Superfund Amendment and Reauthorization Act of 1986
SGZ	Soil Gas Zone
SVE	Soil Vapor Extraction
TAG	Technical Assistance Grant
TAA	Tucson Airport Authority
TANA	Technical Assistance Needs Assessment
TARP	Tucson Airport Remediation Project
TASC	Technical Assistance Services for Communities
TCE	Trichloroethylene
TIAA	Tucson International Airport Area
UCAB	Unified Community Advisory Board
USAF	United States Air Force
UV	Ultraviolet
VOC	Volatile Organic Compound

TECHNICAL ASSISTANCE SERVICES FOR COMMUNITIES - 2018 TECHNICAL ASSISTANCE NEEDS ASSESSMENT

Introduction

EPA requested support from its Technical Assistance Services for Communities (TASC) program to conduct a Technical Assistance Needs Assessment (TANA). The purpose of this needs assessment is to better understand the current unmet technical assistance needs of the TIAA Superfund Site community and to provide recommendations to address those needs. TASC contractors conducted in-person and telephone conversations with community members and stakeholders in October and November 2017 to develop a summary of technical assistance needs. TASC then hosted a technical assistance needs prioritization meeting with TANA participants in March 2018 to develop a set of recommendations.

Site Background and Past Community Involvement

The Tucson International Airport Area Superfund site covers about 10 square miles in Pima County, Arizona, south of the intersection of Interstate Freeways 10 and 19. The site includes Tucson International Airport, a portion of Tohono O'Odham Indian Reservation land, neighborhoods in the cities of Tucson and South Tucson, and the Air Force Plant #44 Raytheon Missile Systems Company.

Since 1942, at least 20 facilities have operated on site; industrial uses and waste disposal activities led to soil and groundwater contamination. The city of Tucson detected groundwater contamination in the early 1950s, and improper waste disposal practices at the Site stopped in the early 1970s. EPA and the city of Tucson sampled groundwater in 1981 after residents reported that water from private wells west of the airport property had a foul chemical odor. This sampling revealed unsafe levels of TCE, a chemical used as a metal degreaser, in several city wells on the south side of Tucson. EPA added the Site to the Superfund program's NPL in 1982.

Additional sampling identified a main plume of groundwater contamination about 5 miles long and a half-mile wide. Other smaller contamination plumes are located north and northeast of the airport. The city of Tucson has closed all municipal wells exceeding the state's health levels and notified private well owners about the potential risks of contamination.

When the contamination was first discovered, EPA identified TCE as the primary contaminant of concern, with perchloroethylene (PCE), 1,1-DCE, chloroform, benzene and chromium as other contaminants of concern. EPA identified 1,4-dioxane as an additional contaminant of concern in the early 2000s. Since cleanup began, more than 40 billion gallons of groundwater have been treated, with more than 130,000 pounds of contaminants removed from soil and groundwater at the Site. Cleanup is ongoing; a new AOP treatment system currently treats all contaminants of concern, including 1,4-dioxane.

There have been several community involvement efforts at the Site. In the 1990s, the League of United Latin American Citizens (LULAC) was a recipient of an EPA TAG. The UCAB, composed of community residents and representatives from the various site agencies, has been active since 1995. The UCAB's goal is to help the community engage with the cleanup process. The UCAB meets quarterly on the third Wednesday of January, April, July and October. The community has also had significant interactions with the Site and site agencies over time. These interactions are discussed further in the next section.

Perspective on Community Technical Assistance Needs from Community Conversations

TASC conducted TANA conversations from October to November 2017. These community members and stakeholders were recommended by EPA or other participants. Participants in the needs assessment shared a variety of concerns related to the community's potential technical assistance needs.

The main concern expressed by participants is that public awareness and understanding of the Superfund site and cleanup process is limited. Participants provided potential explanations for why awareness and understanding may be low at the Site. They also offered potential solutions to increase and improve public awareness and engagement.

One of these explanations is the community's history of distrusting site agencies, dating back to when public officials wrongly assured the community that people were not drinking water with unsafe TCE levels. Participants discussed the importance of acknowledging the Site's complicated history for many community members. With 1,4-dioxane emerging as a contaminant of concern in recent years, participants noted that it is even more important for the city, county and other site agencies to be transparent. Participants shared possible solutions, including relying on existing community resources and leadership, to help build trust and to increase community awareness and understanding of site issues and activities.

Participants noted that while UCAB members are informed about site activities, the information is not necessarily then disseminated to the broader community. Participants suggested ways to help increase the UCAB's effectiveness and inclusiveness. Participants also identified specific technical assistance needs and other needs. The subsections below provide more information on these findings.

Low Public Awareness and Understanding of the Superfund Site

A primary concern shared by all participants is the general public's relative lack of awareness of the status of the Site and its cleanup. The participants agreed that the general community does not have a clear understanding of the cleanup process or the contamination. Participants shared different potential explanations for why site awareness may be low and offered some potential solutions to increase public awareness and engagement. These findings are summarized in the following table.

Low Public Awareness and Understanding Insights Shared by Participants	Solutions to Increase Public Awareness and Engagement Offered by Participants
Outreach methods have not been effective at reaching all parts of the community.	• Provide all information in both English and Spanish. • Conduct one-on-one, on-the-ground outreach when possible. Phone calls, emails and news releases may also help. • Partner with and use existing community resources for outreach. • Have smaller group conversations to better engage the community. • Use more online outreach, such as social media and ads on Pandora and Facebook, while understanding that not everyone has computer and Internet access. • Provide more information about existing community groups and community involvement opportunities. • Consider outreach through English and Spanish publications such as the Arizona Daily Star, the Tucson Citizen, Tucson Weekly, the Tucson Sentinel, the Daily Territorial, La Estrella De Tucsón, Arizona Bilingual and El Imparcial. • Consider outreach through radio and television. • Consider including information with water bills. • Use mass mailings. • Engage the Native American community. • Reach out to elected and public officials at the city, county and state levels. • Work with schools. This may also help reach non-English-speaking parents whose children can help translate for them. • Invite political reporters to attend UCAB and/or other site meetings/events.

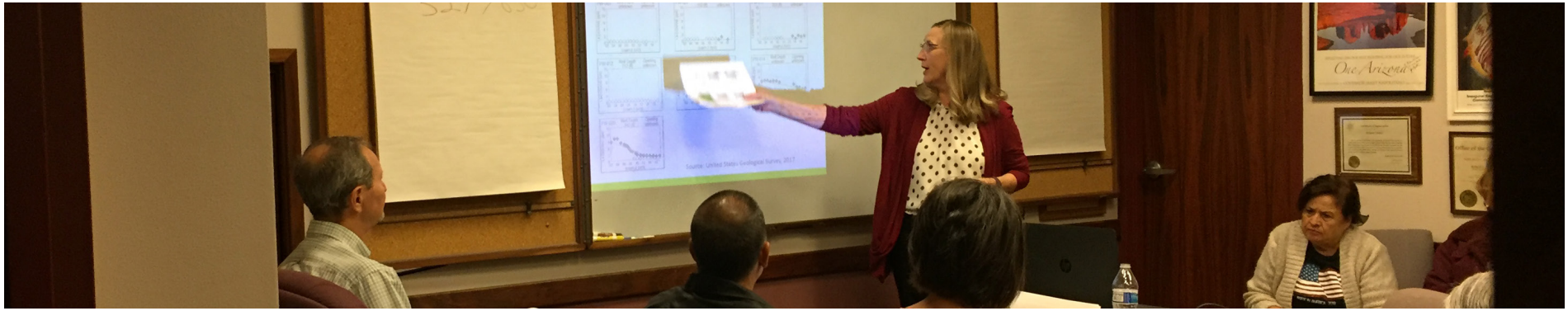
Low Public Awareness and Understanding Insights Shared by Participants	Solutions to Increase Public Awareness and Engagement Offered by Participants
	• Provide information to more of the community, and not just south-side neighborhoods. Provide information to people who have since moved away. • Provide information to newer residents.
Community members are not understanding the material or the message.	• Provide all information in both English and Spanish. • Use plain language. • Consider providing information at different levels for community members with varying levels of involvement and understanding of site issues. • Provide more visuals on fact sheets/newsletters and include contact information. • Provide a plain language summary and document review that accompanies technical documents, particularly for documents with public comment periods. • Provide a community workshop series (potentially at Sunnyside High School) to explain the Proposed Plan and the selected alternative, the cleanup process, historical context and how to submit effective public comments. • Provide a glossary of terms. • Provide appropriate printed materials and videos. • Clarify misinformation and confusion surrounding compensation, litigation and related topics to be able to move forward with explaining current Superfund activities. • Provide small group tours of the new AOP treatment system. • Consider developing videos to share information.
The community's history of distrust affects how people may receive information.	• Acknowledge the community's history and the significance of what has taken place. Listen to the stories of people who have been affected. The University of Arizona's Oral History project can be a resource for agencies to better understand these stories. • Partner with and use existing community resources for outreach. • Partner with or have trusted entities provide information to the community. Some participants noted that, compared to other agencies, the Pima County Health Department has a stronger relationship with the community and could be a good partner. • Have smaller group conversations to better engage the community. • Be more proactive in providing information to the community. For example, provide information about why current levels of contamination are safe, announce public comment periods in a timely manner, and provide resources to help the community understand technical documents. • Focus on transparency and openness. For example, be clear that although the new treatment facility addresses 1,4-dioxane, it cannot remove all possible contaminants, and that as time goes on, there is the possibility that more chemicals may be discovered in the groundwater. • Depending on the situation, avoid having elected officials speak at events, as it may make issues seem unnecessarily political.

Low Public Awareness and Understanding Insights Shared by Participants	Solutions to Increase Public Awareness and Engagement Offered by Participants
Although UCAB is available as a resource, it could be more effective.	• Use communication experts to help make UCAB presentations more understandable to the general public. • Provide information at a more basic level for newer UCAB meeting participants. • Provide support to improve UCAB meeting minutes. For example, some participants would like the minutes to be available more quickly and to be more accurate. • Consider supplementing UCAB presentations with smaller group presentations in the community. • Revisit UCAB membership to include newcomers and younger members of the community. • Improve information dissemination to the broader community in plain language.

Using Existing Community Resources for Outreach

Participants suggested relying on existing community resources and leadership to help promote outreach and build trust. Participants suggested the following next steps:

- Develop and provide train-the-trainer workshops, modules and toolkits to help build community capacity for the long term.
  - Advocacy and grassroots organization training could be part of this training.
  - With trained community members, there will be more consistency regarding the people providing information.
  - Having trusted members of the community on the ground to answer questions about the Site will be helpful for public awareness and understanding of the Site. Consider Promatora health programs as a model for this.
- Engage neighborhood leaders, block leaders and the 29 neighborhood associations in Tucson.
- Collaborate and coordinate outreach and engagement with the Pima County Health Department and the University of Arizona to help build overall trust.
- Reach out to existing community groups, such as Derechos Humanos and other organizations, to have small group conversations.
- Keep elected officials, city council, the board of supervisors and state representatives up to date on cleanup activities, and partner with them to include site updates in their newsletters.



A TASC technical advisor gives a presentation to community members

Specific Technical Assistance and Other Needs

While this TANA focuses on technical assistance needs, all needs expressed by participants are documented. The following table summarizes specific technical assistance needs as well as other needs shared by participants.

Technical Assistance Need Type	Individual Needs Mentioned
Informational Needs	• Information on the cleanup timeline and how long the cleanup process will take. • Information on the general Superfund cleanup process. • Historical information about the Site, including the extent of historical contamination and remediation. • Updated site and area maps. • Potential health consequences of contamination. • The status and safety of drinking water. • Current exposure risks. • Information about 1,4-dioxane. • How to submit effective public comments and information about public comment periods. • Information about Agency for Toxic Substances and Disease Registry (ATSDR) studies. • Document reviews in plain language. • A frequently asked questions (FAQ) sheet about the Site. • Information about cleanup technologies and how the approach to cleanup at the Site compares to the newest technologies available.
Procedural/Structural Needs	• An ongoing process to look at community needs. • A presentation on different types of technical assistance services so the community can understand what is available and which services would be most appropriate. • Facilitation and mediation support to help different groups engage in meaningful discussion together. • A more user-friendly information repository and EPA website.
Other Needs	• Allow the community to share concerns beyond the confines of the Superfund process to help acknowledge and validate these concerns. • Clarify misinformation and confusion surrounding compensation, litigation and related topics in order to be able to move forward with explaining current Superfund activities.

Prioritization of Technical Assistance Needs from the March 2018 Meeting

On March 28, 2018, TASC hosted a technical assistance needs prioritization meeting with TANA participants in Tucson, Arizona. TASC circulated the meeting announcement and a list of 23 technical assistance needs identified in the TANA with the individuals that participated in the TANA conversations in October and November 2017, and requested email input on the technical assistance needs priorities if people were unable to attend the March 2018 meeting.

At the technical assistance needs prioritization meeting, the list of 23 needs from the TANA were prioritized by meeting participants. The meeting participants emphasized that all 23 of the needs were very important. After further discussion, they grouped the needs into three levels – first priority, second priority and third priority. Needs were not prioritized within these levels. Meeting participants also shared their thoughts on effective ways to address their prioritized needs. They mentioned the importance of using different methods for reaching people, including in-person community events as well as written materials that could be shared through different venues.

Participants also emphasized the importance of having information available in both English and Spanish, as well as being more inclusive and transparent in outreach efforts.

First Priority Technical Assistance Needs

- Historical information about the Site, including the extent of historical contamination and completed and future remediation (fact sheet or presentation).
- Information on the potential health consequences of contamination (fact sheet or presentation).
- Information about the status and safety of drinking water (fact sheet or presentation).
- An ongoing process to look at community needs.
- Renewal and improvement of the UCAB charter, structure, membership and outreach approaches.
- More frequent site and cleanup updates in plain English and Spanish.

Second Priority Technical Assistance Needs

- Information on the cleanup timeline and how long the cleanup process will take (fact sheet or presentation).
- Information about 1,4-dioxane (fact sheet or presentation).
- Information about how to submit effective public comments and information about public comment periods (fact sheet or presentation).
- FAQ sheet about the Site.
- Information about current and potential new cleanup technologies (fact sheet or presentation).
- An improved website that is easy to navigate and helpful for community members.
- Glossary of terms.

Third Priority Technical Assistance Needs

- Information on the Superfund cleanup process (fact sheet or presentation).
- Updated site and area maps.
- Information about current exposure risks (fact sheet or presentation).
- Information about Agency for Toxic Substances and Disease Registry (ATSDR) studies (fact sheet or presentation).
- Document reviews in plain language (fact sheet/written summary or presentation).
- Presentation on types of technical assistance services available to communities.
- Facilitation and mediation support to help groups work better together.
- A more user-friendly and accessible information repository.
- Clarification of misinformation and confusion surrounding compensation and litigation.
- Contact information for agencies and key staff.

Recommendations for Technical Assistance

This section describes recommendations to help meet community needs based on conversations with community members and stakeholders. These recommendations focus on technical assistance. They could be fulfilled by EPA and other involved entities such as state agencies and the U.S. Air Force, with support from the TASC program and other technical assistance programs where appropriate. Draft recommendations have been revised based on the March 2018 Prioritization Meeting.

TASC recommends addressing the community's technical assistance needs in the order of the priorities identified during the March 2018 Prioritization Meeting.

First Priority Technical Assistance Needs

- Provide in-person workshops/presentations and fact sheets about the following topics. Fact sheets should be in plain English and Spanish, and include visuals and maps. The topics below could be grouped together as appropriate for the workshops/presentations and fact sheets.
  - Site and cleanup updates.
  - Historical information about the Site, including the extent of historical contamination and completed and future remediation.
  - Information on the potential health consequences of contamination.
  - Information about the status and safety of drinking water.
- Coordinate and host regularly scheduled quarterly conference calls with community members to encourage community-agency interaction and continue to gather information on community needs.
- Provide additional meeting support to the UCAB with a focus on potential renewal of and updates to the UCAB charter, meeting structure, outreach methods (including website) and membership. This could include providing plain language support for the technical presentations shared by consultants so that the information can be more easily disseminated to the general public.

Second Priority Technical Assistance Needs

- Provide in-person workshops/presentations and fact sheets about the following topics. Fact sheets should be in plain English and Spanish, and include visuals and maps. The topics below could be grouped together as appropriate for the workshops/presentations and fact sheets.
  - Information on the cleanup timeline and how long the cleanup process will take.
  - Information about 1,4-dioxane.
  - Information about how to submit effective public comments and information about public comment periods.
  - Information about current and potential new cleanup technologies.
- Provide short fact sheets (1-2 pages each) for the community.
  - FAQ sheet about the Site.
  - Glossary of terms.
- Provide or support site website changes to improve site navigation and readability. This could include reaching out to community leaders via phone or email for additional input.

Third Priority Technical Assistance Needs

- Provide in-person workshops/presentations and fact sheets about the following topics. Fact sheets should be in plain English and Spanish, and include visuals and maps. The topics below could be grouped together as appropriate for the workshops/presentations and fact sheets.
  - Information on the Superfund cleanup process.
  - Information about current exposure risks.
  - Information about ATSDR studies.
  - Technical review of key documents.
  - Information on the types of technical assistance services available to communities.
  - Clarification of misinformation and confusion surrounding compensation and litigation.
- Provide updated site maps and contact information for the community.
- Provide professional facilitation and mediation support to help different community groups work better together. This could include having professional facilitators work with community leaders to develop productive meeting agendas and having professional facilitation of public meetings.
- Regularly review and update the information repository. This could include providing materials in Spanish, when possible.

Additional Recommendations

- Continue working with community groups and agency partners to be more proactive with sharing information and building trust. This could include partnering with agencies for outreach materials and events, keeping websites and repositories up to date, and providing facilitation support to help meetings run smoothly.
- Provide train-the-trainer Superfund workshops for community leaders on the Superfund process and cleanup activities. This could include developing modules and toolkits to help community leaders continue to build capacities in their neighborhoods.
- Update the TANA after a specified period to more formally consider additional community needs. Based on community interest and needs at that time, potentially develop a community outreach plan to broaden community awareness of the Site and reach out to newer residents.

Sources Consulted for Background Information on the Site and the Community

- EPA Site Overview for Tucson International Airport Area Superfund site. Available at: www.epa.gov/superfund/tucsonairport.
- Excerpts from the May 1985 series from the Arizona Daily Star newspaper, shared by community participants to provide historical context.

STAKEHOLDER INTERVIEW QUESTIONNAIRE

Name: _____

Affiliation: _____

Date/Time: _____

History

1. How long have you lived/worked in this area?

2. Are you familiar with the Site?

3. How did you first become aware of contamination associated with the Site?

4. What is your understanding of the history of the contamination at the Site and its effect on the community?

5. What are your concerns about the Site? Please explain.

6. Have you spoken to anyone about your concerns? If so, who and when? Do you know if anything has been done to address these concerns?

7. Are you aware of any activities that are currently underway to clean up environmental contamination at the Site?

Community Involvement

8. Are you currently receiving information about the Site's environmental issues? How are you currently receiving information about the Site?

9. Is the information clear and easy to understand? If not, describe the areas where you believe the community may need assistance understanding and responding to information about the Site. What additional information would you like to receive?

10. Have you attended any community meetings regarding the cleanup activities? If no, is there a reason why you have not attended?

11. How effective do you feel these community meetings have been?

12. Do you have any suggestions to improve the effectiveness of these meetings?

13. In your opinion, what days of the week (and times) are best for community meetings?

14. What are the issues or areas in which the community may require assistance in order to participate meaningfully in the Superfund decision-making process? What type of assistance do you believe would be most helpful?

15. Are there particular community members or stakeholders affected by the Site who may need additional assistance understanding site information and what it may mean to them? Are these stakeholder groups reached by existing organizations that serve the broader community?

Level of Confidence

16. What has your experience been with EPA and the State and any other government agencies or officials?

Communication

17. How do you feel about the level of community involvement and outreach from the project to the residences and businesses affected by the Site?

18. Do you feel you have been kept adequately informed? If not, what can be done to change this?

19. What is the best way to provide information to you (Facebook, email, open house, newsletters, fact sheets, community meetings, TAGs, other)?

20. How frequently?

21. Are you aware of the information repository at the Site? Is this location convenient for the community?

22. Are you interested in being on the mailing list to receive information updates on environmental cleanup activities at the Site? If so, can we confirm your address (and e-mail address)?

23. Can you suggest any other individuals or groups that should be contacted for additional information or to be added to the mailing list?

24. Is there any other pertinent information you would like to share with us at this time?

The September 2019 Proposed Plan Meeting

Tucson International Airport Area
Superfund Site
www.epa.gov/superfund/tucsonairport

Community Involvement Plan
January 2020

EPA United States Environmental Protection Agency